

Restriction Response
U.S.S.N. 10/621,247
Page No. 16

REMARKS

Applicant has attempted to fully comply with the election of species requirement, even though it is not agreed with. This is particularly true with respect to the Group designated as (3) above. For this Group Applicant respectfully submits that for the following reasons, all of the techniques recited in Group 3 belong to the same general class, and are thus not patentably distinct.

Electroanalytical response

DC cyclic voltammetry
DC linear scan voltammetry
DC anodic stripping voltammetry
DC cathodic stripping voltammetry
DC adsorptive stripping voltammetry
DC cyclic voltammetric stripping technique
DC staircase voltammetry
Normal pulse voltammetry
Square wave voltammetry
AC voltammetry
Chronoamperometry
Chronopotentiometry
Electrochemical Impedance Spectroscopy techniques
Polarographic techniques

All of the above-cited techniques belong to the same group that can be generically called "dynamic electrochemical techniques" [Kissinger, p.6]. All of them may be performed by using the same instrumentation - potentiostat/galvanostat [Kissinger, chapter 6]. All of them may be performed using the same setup, namely an

Restriction Response
U.S.S.N. 10/621,247
Page No. 17

electrochemical cell [Kissinger, chapter 9]. All of them reflect dynamic changes triggered by application of controlled voltage (or current) displayed by changes in current (or voltage).

In the other words, all of them "apply an electrical *excitation* signal (often the independent variable) to some system (particular electrode-solution composition and geometry) and then monitor a *response* signal (dependent variable), which together with the excitation allows some description of the properties of the system" [Kissinger, p.5].

Most of them can be described in general as "voltammetry" techniques, that are considered as a one group belonging to electrochemical transient techniques [Dean, p 14.25]

This is a common practice – namely the coverage of a wide group of electroanalytical techniques - in the patent literature. Below are some examples:

1. US 6,551,479, L. Graham et. al.:

Claims 10 – 15 claimed potentiometry, amperometry, conductometry, voltammetry, culometry, cyclic voltammetric stripping respectively as species being not patentably distinct (much broader range of techniques as compare to our claim).

2. US 6,709,561, M. Pavlov et. al.:

In this patent, Cyclic Voltammetric Stripping (*i.e. cyclic voltammetry*), Cyclic Pulse Voltammetric Stripping (*i.e. pulse voltammetry*) techniques (claim 4) and alternating current method (*ac voltammetry, EC Impedance*) (claim 6) are claimed as electroanalytical techniques.

Restriction Response
U.S.S.N. 10/621,247
Page No. 18

3. US 6,808,611, Z. Sun et. al.: Claims 8-9, 16-17, and 24-25 of this patent comprise of a broad multitude of electrochemical responses (*and corresponding electroanalytical techniques*):

- anodic stripping charge (*Integrated Anodic Stripping Voltammetry, Integrated Cyclic Voltammetry, Integrated Cyclic Voltammetric Stripping, Pulsed Voltammetric Stripping, Anodic Stripping Chronoculometry.*)
- cathodic deposition charge (*Integrated Linear Sweep Voltammetry, Integrated Cyclic Voltammetry, Integrated Staircase Voltammetry, Chronoculometry*)
- anodic stripping rate (*Anodic Stripping Voltammetry, Cyclic Voltammetry, Cyclic Voltammetric Stripping, Pulsed Voltammetric Stripping*)
- cathodic deposition rate (*DC voltammetry, AC voltammetry, chronopontetometry*)
- anodic stripping area (*same as charge above*)
- cathodic deposition area (*same as charge above*)
- electric current in miliamperes (*any electroanalytical response*)
- electrical potential in milivolts (*any electroanalytical response*)
- differential electrical plating potential (*any differential electroanalytical technique*).
- AC current (*all AC voltammetries and Electrochemical Impedance Measurements*)
- DC current (*all DC Voltammetries, also pulse and Differential, and Polarography*)
- differential current (*any differential electroanalytical technique*).

See:

P.T. Kissinger, W. Heineman in Laboratory Techniques in Electroanalytical Chemistry

Restriction Response
U.S.S.N. 10/621,247
Page No. 19

2nd Ed., Marcel Dekker, NY, 1996.

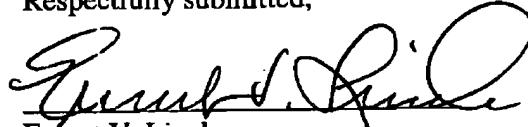
J. A. Dean, Analytical Chemistry Handbook, McGraw-Hill, 1995.

Accordingly, reconsideration of the Restriction/Election requirement in view of this response is respectfully requested.

CERTIFICATE OF FACSIMILE TRANSMISSION

The undersigned hereby certifies that this correspondence was submitted by facsimile in the USPTO on the date shown on Page 1.

Respectfully submitted,



Ernest V. Linek
Reg. No. 29,822
Attorney for Applicant
Banner & Witcoff, Ltd.
28 State Street, 28th Floor
Boston, MA 02109-1775
Tel: (617) 720-9600
Fax: (617) 720-9601
E-Mail: ELinek@bannerwitcoff.com

Date: November 7, 2005

Document No. 120688